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The Bristol Medico-Chirurgical Journal

"Scire est nescire, nisi id me
Scire alius sciret."

AUTUMN, 1936.

CARCINOMA OF THE BRONCHUS.*

Clinical Features.

By C. BRUCE PERRY, M.D., F.R.C.P.,

Professor of Medicine, University of Bristol;
Assistant Physician, Bristol General Hospital;
Physician, Children's Hospital.

Twenty years ago the diagnosis of cancer of the lung was rarely made, yet now we find carcinoma of the bronchus by no means a rarity. Whether this apparent increase in the incidence of the disease is an actual increase or not I do not propose to discuss. The purpose of this paper is to attempt to determine the incidence of the various clinical symptoms. In order to do this the cases admitted to the medical wards of the General Hospital during the last eight years have been analysed, and it is interesting to note that the forty cases thus considered show almost

* Papers read at a discussion by the Society on Wednesday, March 11th, 1936.

exactly the same symptomatology as other series of cases which have been published.

Before dealing with the signs and symptoms the age and sex incidence must be considered. All series of reported cases show that there is a very marked incidence of the disease in males as compared with females, and in the forty cases there were only six females. The age incidence in our series was highest between 40 and 70, and thirty-two of the cases fell into this age period. Cases do, however, occur at earlier ages; our youngest case was 23, and the oldest 76.

One of the first things that strikes one in a consideration of these cases is the duration of symptoms before the condition is recognized. It is hoped that by this discussion we may stimulate interest in the disease, and that this may lead to earlier recognition. As in any case of cancer, it is essential that early diagnosis should take place if treatment is to be of any avail. In our series the average duration of symptoms was just over $10\frac{1}{2}$ months, but, and this is the most important point, an average of $6\frac{1}{2}$ months elapsed between the onset of symptoms and the recognition of the condition. One patient lived at least four years after the onset of symptoms, and had been admitted to a sanatorium and discharged as non-tubercular eighteen months before I first saw him. He finally died about two years after we recognized the disease. A biopsy performed by Mr. Scarff through a bronchoscope showed this growth to be a squamous-celled carcinoma, which may account for the long course.

Turning to symptoms, the most important and consistent of these are dyspnœa, cough, and pain in the chest.

I have analysed the symptoms into first and

second, as far as was possible, in an attempt to discover what symptoms should lead to an early diagnosis of the disease. In 39 cases cough was the first symptoms in 15, associated in 9 cases with blood-stained sputum. It appears to be rare for any gross hæmoptysis to occur in these cases, but a little streaking of the sputum with blood is not uncommon, and is very important, especially when it persists.

The classical red-currant-jelly sputum is rarely seen. Pain in the chest was the first complaint in 11 cases. This is variously described, but is definitely not a "pleural pain," being a constant pain unrelated, as a rule, to breathing or cough. Dyspnœa occurred as a first symptom in 10 cases. So that either cough, pain, or dyspnœa was the first complaint in 35 out of 39 cases (one case noted pain and dyspnœa simultaneously). Loss of weight we believe to be fairly common, though it was noted only rarely in our cases, I think because it was not specifically inquired for. Yet some cases undoubtedly suffer no gross loss of weight until comparatively late in the course of the disease. The other early symptoms are interesting, but of no serious value to diagnosis. Laryngeal palsy occurs from involvement of the recurrent laryngeal nerve by the tumour mass, or more probably by glands at the hilum, and usually means a fairly extensive growth. The frequency of cerebral metastases in this disease is well recognized, and one case was admitted to hospital as a hemiplegia, and it was some weeks before abnormal signs were detected in the chest. Such cases are not very uncommon. Harvey Cushing has removed secondaries from the brains of two cases who survived five and seven years respectively.[1] One patient was admitted with signs of cardiac failure, and post-mortem showed

that the growth had invaded the pericardium with resultant cardiac embarrassment and failure. This case was regarded as rather a "freak." Yet in a recent paper from America 9 per cent. of the patients present themselves with this symptomatology.[2]

The second symptom noted by the patient is again usually either cough, pain, or dyspnœa, but in our series pain was by far the commonest second symptom noted. It occurred as a rule about two months after the onset of cough or dyspnœa.

SYMPTOMS IN THIRTY-NINE CASES.

	First Symptom.	Second Symptom. (Usually about two months later than first.)	Total Symptoms.
Cough	15	4	21
Cough, with blood-stained sputum	(9)	(1)	(11)
Pain	11	14	28
Dyspnœa	10	6	19
Loss of weight	3	3	8
Laryngeal palsy	2	—	2
Cerebral symptoms	1	1	3
Cardiac failure	1	—	1
Dysphagia	—	—	5

Taking the symptoms as a whole, 28 of the 39 cases complained of pain in the chest, 21 of cough, and 19 of dyspnœa. These, then, are the symptoms which must make us consider the possibility of carcinoma of the bronchus.

Turning to physical signs, these vary considerably according to whether there is any obstruction of the lumen of the bronchus by the growth, and whether this is partial or complete. In addition, pleurisy with effusion may develop, and, in fact, pleurisy apparently primary in any patient over 40 should immediately arouse a suspicion of carcinoma of the bronchus, but this as a rule is a late manifestation. A pleural effusion was present in 16 of our 40 cases when first examined, in 9 it was a clear effusion, in 6 hæmorrhagic, and in one purulent. Hæmorrhagic pleural effusions are, of course, very suggestive of malignant disease, but as you see the majority of malignant cases have a clear fluid. Complete obstruction of the lumen of the bronchus results in collapse of the lung beyond with flattening of the chest, diminished movement, impaired resonance, and diminished breath sounds. These signs were present in 10 cases when first seen. It is this diminished aeration and collapse which is responsible for the usual X-ray picture. Partial obstruction leads to the development of bronchiectasis in the lung peripheral to the growth, with clubbed fingers, foul sputum, and the physical signs of bronchial dilatation. 6 cases presented themselves with this picture. The tumour may present signs due to pressure on surrounding organs or as a result of its own bulk. Only 4 cases showed venous obstruction from pressure on veins—not nearly so frequently as in mediastinal tumours—three produced œsophageal obstruction, and one case produced physical signs of a solid tumour in the chest. Only 1 case showed no abnormal physical signs. But if radical surgical treatment is to have any real chance of success we must aim at diagnosing our cases at this stage. It must be admitted,

however, that the early diagnosis of carcinoma of the bronchus is fraught with difficulty, especially as the very first symptom may be due to the development of metastases.

REFERENCES.

[1] Fried, B. M., *Medicine*, 1931, 10, 375.

[2] Arkin, A., and Wagner, D. H., *Journ. Amer. Med. Assoc.*, 1936, 106, 587.

CARCINOMA OF THE BRONCHUS.

Primary Carcinoma of the Lung Radiologically Considered.

By GILBERT B. BUSH, M.B., Ch.B., D.M.R.E.,

Hon. Assistant Radiologist to the Bristol General Hospital; Hon. Radiologist to the General Hospital, Weston-super-Mare.

It is generally admitted that the routine X-ray examination of the chest in all cases presenting doubtful signs and symptoms has during the past ten years or so contributed materially to the earlier recognition of this tragic disease of the lungs, but it it still unfortunately true that in the majority of cases which come for radiological investigation the disease is generally too far advanced for other than palliative treatment.

The radiographic features in this disease closely follow and are dependent upon the pathological process taking place, and the stage of development and its secondary results will determine the X-ray findings in a particular case.

I propose, therefore, briefly to follow the stages of the disease from its earliest beginnings, and correlate the morbid anatomy and physiological functional changes with the abnormal radiological appearances as observed on fluoroscopic examination and radiographs. If the pathological processes are fully appreciated, it is thus possible to argue back from the X-ray findings in the majority of cases, and glean a considerable amount of useful information as to the

nature, extent and stage of the disease when one meets it. The X-ray examination will also, in many cases, indicate what lines of treatment are possible, and assist in the prognosis.

SECTION I.

When the disease is confined to the Lung.

1. *Pathological changes.*—The growth is in the endobronchial stage, with a small tumour and incomplete obstruction. The obstruction is often more marked during expiration than during inspiration.

X-ray findings.—There may be none. But one may find delayed or incomplete deflation in the affected lobe or lobule if films are taken on inspiration and expiration. Lipiodol injection may show a filling defect, particularly if serial films are made. Lenk has also described a peculiar "mediastinal jerking," observed on screen examination.

2 (*a*). *Pathological changes.*—The bronchus becomes occluded, producing collapse or deflation of a lobe; if in a main bronchus, then of one lung. At this stage the growth has generally eroded through the bronchus, and the neighbouring tissue and lymph-nodes are affected.

X-ray findings.—(Lobar manifestations.)

(*a*) There is opacity in the area supplied by the bronchus, generally a lobe. (Fig. 1, Case 2.) The whole of the lung may be opaque if the main bronchus is obstructed. (Fig. 2.)

If films are made with a penetrating ray and the Bucky diaphragm, the shadow is seen to have two components, a distal cloudy zone, showing no striations, like ground-glass, which is deflated lung, and a denser central zone merging into the mediastinal shadow and showing vascular striations. This denser shadow

PLATE IX

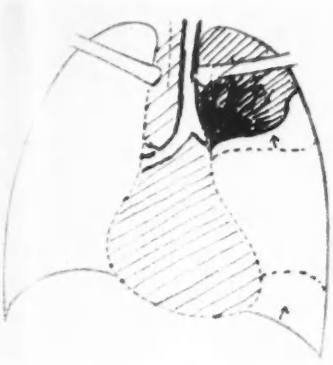

DIAGRAM A.

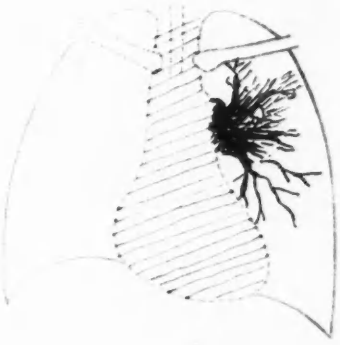

DIAGRAM B.

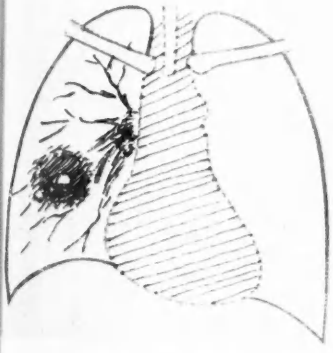

DIAGRAM C.

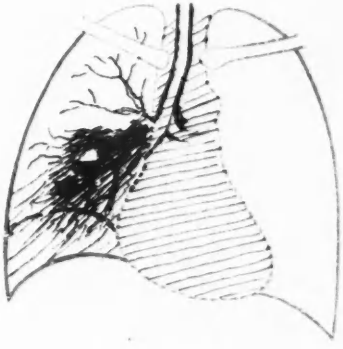

DIAGRAM D.

FIG. 1.

CASE 2.—Carcinoma of right upper lobe bronchus, with deflation of upper lobe, and phrenic paralysis.

FIG. 2.

CASE 3.—Carcinoma of right main bronchus. Deflation of whole right lung. Tracheal "swing" to the right. Secondary infection in left upper lobe.

CASE 2.—Carcinoma of right upper lobe bronchus, with deflation of upper lobe, and phrenic paralysis.

CASE 3.—Carcinoma of right main bronchus. Deflation of whole right lung. Tracheal "swing" to the right. Secondary infection in left upper lobe.

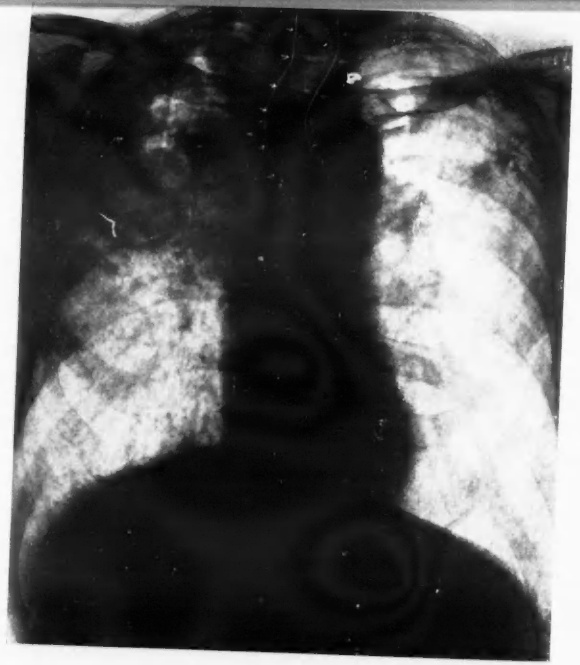

FIG. 3.

To illustrate the type of tracheal displacement in lung fibrosis (chronic fibroid phthisis).

FIG. 4.

CASE 1.—Carcinoma of first axillary branch of left upper lobe bronchus, with involvement of paraortic glands and recurrent laryngeal nerve. (July, 1935.)

PLATE XI

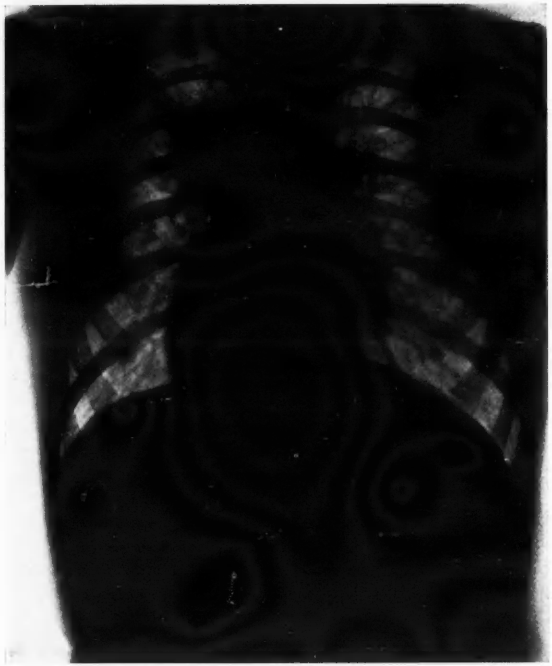

FIG. 5.

Child, aged 6, with lymphadenitis of the tracheo-bronchial glands, with surrounding lung-hyperæmia.
(Negative is reversed right to left).

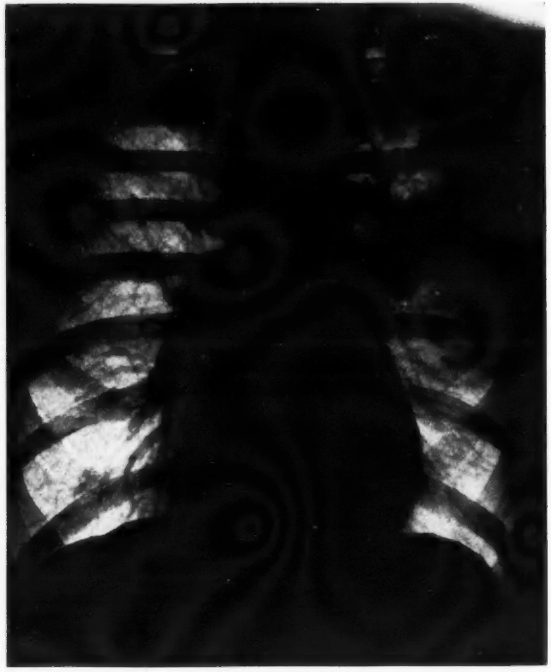

FIG. 6.

CASE 1.—September, 1925. Growth extending. Glands larger.

is growth, but the large blood-vessels near the hilum are not obliterated. (Diagram A.)

(*b*) The *interlobar fissures* are altered in position. (Fig. 1 and Diagram A.) Antero-posterior or lateral films will usually show this.

(*c*) If the stenosis is in a bronchus of the first degree the *mediastinum and trachea are displaced* to the side of the lesion, and this displacement is seen on screen examination to be increased during inspiration. Kerley points out that the type of tracheal displacement can give a valuable clue to the nature of the pathological process underlying a solid-looking lung, and will often differentiate a displacement due to collapse from that due to fibrosis. In the former (Fig. 2) the trachea tends to swing as a whole towards the side of the lesion, whereas in fibrosis (Fig. 3) it bends towards that side at about the level of the sternal notch.

Differential diagnosis.—A similar general appearance may be produced by (1) a foreign body lodged in a bronchus, (2) post-operative collapse, (3) pneumonic infection with collapse, (4) silicosis producing stenosis of a bronchus. A Potter-Bucky picture will help to exclude these conditions, while the mode of onset of symptoms, history and clinical findings should even more definitely assist one in making a diagnosis.

2 (*b*). *Pathological changes.*—No bronchial stenosis, but the growth may rapidly erode through the bronchial wall and infiltrate the lung.

X-ray findings.—This produces the "nodular" type of shadow in the lung-field, most commonly in the hilar zone. (Fig. 4, Case 1, and Diagram B.) Being placed deep in the lung, it may produce no physical signs, although symptoms may be suggestive. One sees a fairly dense opacity around the root of the

lung with no collapse or consolidation in the more distal parts of the lobe or lung as a whole. The shadow has a poorly-defined outer border, and generally shows linear shadows radiating out into the lung. Also lung-markings are visible in the opacity. Enlargement of the tracheo-bronchial glands can sometimes be demonstrated. At any time this may pass into the lobar type already described.

Differential diagnosis.—From (1) lymphadenoma infiltrating the lung. Here other glands may be involved in the neck, axilla, etc., and paratracheal glands are often enlarged ; also the lesions are generally bilateral in the chest. From (2) lymphadenitis of the tracheo-bronchial glands, with surrounding lung-hyperæmia (Fig. 5). Here the age of the patient is important, as this condition is generally found in children (so-called " hilum tuberculosis "). (3) Lastly, some rare forms of pulmonary syphilis (Kerley).

3. *Pathological changes.* — Infection supervenes distal to the bronchial obstruction with bronchiectasis, necrosis, abscess-formation and possibly gangrene.

X-ray findings.—Clearer areas with fluid levels may be seen within the tumour shadow. (Diagram D.) If the patient is first seen at this stage we have to differentiate from a non-malignant lung abscess. (Diagram C.) In the malignant type the denser part of the shadow is nearly always continuous with that of the hilum, and the breaking-down area is eccentrically placed in the shadow.

4. *Pathological changes.*—Mucoid degeneration may occur in the tumour.

X-ray findings.—Kerley has reported two cases in which this was detected and demonstrated radioscopically, the tumour appearing to "shake like a jelly."

FIG. 7.

CASE 1.—March, 1936. Growth and glands further enlarged. Early deflation of part of upper lobe. Left phrenic paralysis.

FIG. 8.

CASE 4.—Carcinoma obstructing right lower main bronchus, with collapse of right lower lobe. Lipiodol injection.

SECTION 2.

Secondary Changes outside the Lung.

If any definite signs of these (see below) are found radical removal of the growth by lobectomy is contra-indicated.

1. *Pathological changes.*—Lymph-glands at the root of the lung are infected by growth.

X-ray findings.—Small bronchial glands are generally obscured by overlying growth, as are also the tracheo-bronchial glands, though the latter can sometimes be seen. (Figs. 4, 6 and 7, Case 1.)

2. *Pathological changes.*—Compression or infiltration of the phrenic nerve, producing paralysis of one half of the diaphragm.

X-ray findings.—The diaphragm on the affected side is raised, and shows "paradoxical movement" on inspiration. (Figs. 1 and 7.) The commonest cause of this finding is neoplasm, but an aortic aneurysm of long standing can sometimes produce it.

3. *Pathological changes.*—Involvement of the vagus, or secondary deposits in the abdomen, producing gastro-intestinal symptoms.

X-ray findings.—Cases referred for gastric ulcer or carcinoma of the digestive tract sometimes turn out to be primary carcinoma of the lung. The chest should always be screened as a routine in abdominal cases.

4. *Pathological changes.*—Pleural involvement, with effusion.

X-ray findings.—Here the dense shadow of the effusion obscures everything in the lung. Paracentesis and further examination sometimes helps, but indirect X-ray signs may be obtained. For instance, if there are signs of a large effusion, and yet the heart and mediastinum are not displaced, something else is

FIG. 7.

CASE 1.—March, 1936. Growth and glands further enlarged. Early deflation of part of upper lobe. Left phrenic paralysis.

CASE 4. Carcinoma obstructing right lower main bronchus, with collapse of right lower lobe. Lipiodol injection.

underlying the effusion, either collapse or fibrosis. The type of displacement of the trachea will help to decide which.

5. *Pathological changes.*—There may be a very small primary growth in a bronchus which rapidly invades a blood-vessel, producing one or more secondary nodules or masses in the lung.

X-ray findings.—There is no hilar shadow, but single or multiple isolated shadows are seen in the lung. In this case one cannot be sure where the primary is. Some think that this is a form of primary alveolar carcinoma, but the question is debatable, and one for pathologists to settle.

SECTION 3.

Accessory Methods of Examination.

1. *Lipiodol injection.* (Fig. 8.)—I have only time merely to mention this. In selected cases it is a most valuable accessory method to demonstrate obstruction or filling defects in the bronchi, particularly if serial studies are made. If expert bronchoscopy is available this may be preferable.

2. *Artificial pneumothorax.*—This is sometimes useful in order to differentiate an intrapulmonary from an extrapulmonary tumour.

In conclusion, I would like to thank various colleagues for referring patients for examination, and particularly to Dr. Peter Kerley, of London, for the loan of some of the slides and for much valuable help and advice in preparing these notes.

PLATE XIV

FIG. 1.

FIG. 3.

FIG. 2

FIG. 4.

CARCINOMA OF THE BRONCHUS.

Bronchoscopic Diagnosis of Carcinoma of the Lung.

By GORDON SCARFF, M.B., Ch.B., F.R.C.S.,

Assistant Surgeon, Ear, Nose, and Throat Department, Bristol General Hospital.

While the clinical and X-ray findings, which you have just heard, will make the diagnosis of carcinoma the most probable one, in order definitely to establish this diagnosis these cases are referred to the endoscopist. The air passages are examined directly by a bronchoscope for evidence of neoplasm, and a portion of the suspected tissue removed for microscopic examination.

On bronchoscopy the first noticeable feature is the fixation of the affected area of lung, which is in marked contrast to the normal range of mobility. There is usually some secondary infection present which may cause reddening of the mucosa, especially in the region of the growth. On reaching this area one finds the bronchus to present the appearances found in one of these drawings on the slide. In 9 cases examined 5 were right-sided and 4 were left, and for simplicity all the drawings are of the right bronchial tree. The first is copied from Chevalier Jackson's work, and shows the normal appearances on looking down the right bronchus. The second picture is the one most commonly seen—in 5 out of the 9 cases—where the affected bronchus is seen to be completely occluded, the lumen being

indicated by a depressed area which may be central or lateral. In the first two cases examined this was taken to be due to pressure from without either by growth or an inflammatory mass, as the mucosa was intact and there was no sign of any ulceration, and no specimen was taken for biopsy, but in the later cases a small portion of mucosa was removed, and the submucous tissue was found to be infiltrated by growth of squamous or oat-celled type. The third picture shows diminution of the lumen of the lower lobe bronchus by a growth in the substance of the lung. A portion of the mucosa overlying this was reported on as doubtful, but the bronchoscopic appearance of the middle lobe bronchus was similar to the previous picture. He died from hæmoptysis four weeks later, and post-mortem examination showed scattered nodules throughout the lung substance. The fourth is from a man, aged 50, with very advanced clinical signs, in whom the right bronchus was almost completely blocked immediately below the bifurcation of the trachea by a mass of fungating growth.

The fixation, combined with any one of these bronchoscopic appearances, leaves little doubt as to the diagnosis from benign new growth and chronic inflammatory conditions, but a portion of the growth should always be taken for confirmation. Treatment by bronchoscopic means is limited to treatment by radium, and encouraging results are reported by others by means of implantation of a tube containing radon. As we have no radium emanation available, I have tried in two cases implantation of radium needles, but in each case these have been coughed out within twenty-four hours, so that some modification of this will have to be considered if this is to be an adjunct to treatment by other means.

CARCINOMA OF THE BRONCHUS.

The Pathological Aspect.

By ARTHUR L. TAYLOR, M.D.,

Pathologist, Bacteriologist, and Clinical Pathologist, Bristol General Hospital.

Incidence.—The following observations are based on a study of cases of bronchial carcinoma encountered in the Pathological Department of the General Hospital during the last eight years. In this period 32 cases have come to post-mortem, a fact which testifies to the very considerable frequency of these tumours. Similar large numbers are being reported from practically all the large hospitals in Europe and America, and it is believed in many quarters that lung cancer is on the increase. Whether the reported increase is real or not is a much debated question which is still far from settled. It is obvious that nowadays closer attention is being paid to the subject, and it may well be that more careful observation and improved methods of modern diagnosis account for the greater number of reported cases.

An analysis of the post-mortem records for the last eight years shows that bronchial carcinoma is second only to gastro-intestinal cancer in frequency, comprising 2·35 per cent. of all autopsies, and no less than 13·6 per cent. of all malignant deaths. Its incidence compared with that of other primary growths is seen in the following table :—

TABLE I.

Eight years, 1928 to 1935. Total post-mortems (excluding violent death) 1,360
Total malignant cases 236

Primary Site.	No.	Percentage of all post-mortems.	Percentage of all malignant post-mortems.
Stomach	41	3·01	17·4
Intestine	38	2·79	16·1
Lung	32	2·35	13·6
Genito-urinary ..	29	2·13	12·3
Brain	20	1·47	8·5
Œsophagus	19	1·40	8·1
Other organs	9 or less.	0·70 or less.	4 or less.

Bronchial carcinoma is much commoner in men than in women; of our 32 cases 26 were males. The age incidence corresponds well with that of carcinoma generally: the average age in males was 49 years, in females 52 years, with an average for the whole group of just under 50 years. The youngest cases were males of 24 and 26, and the eldest 67 years. No special occupational incidence was observed in the 27 cases where this was known.

MORBID ANATOMY.—In over 90 per cent. of cases lung carcinoma is of hilar origin, commencing in the mucosa of one of the large bronchi and spreading thence into the lung tissue and rapidly invading the bronchial lymph glands. All but one of our series were of this type. The tumour is whitish in colour and generally of firm consistency; if it is large it may show central cavitation from necrosis. In many cases (16 of our series) the growth extended widely into the mediastinum, infiltrating the roots of the great vessels and even penetrating the heart wall. The appearance

thus presented may suggest a primary mediastinal growth, but careful dissection along the main bronchi reveals an ulcerated patch of mucosa sometimes surprisingly small, which indicates with certainty the true site of origin. Right and left lungs appear to suffer with almost equal frequency; in our cases 14 occurred on the right side and 17 on the left. The main bronchi were affected 9 times, the upper and middle 10 times and the lower 12. The condition of the lungs beyond the growth largely depends on two factors: the degree of bronchial stenosis, and the presence or otherwise of secondary infection. Thus the emphysema which occurs in the early stage of partial occlusion is replaced by massive collapse when the obstruction becomes complete. An added infection is almost constantly present in the later stages, and at post-mortem one commonly finds broncho-pneumonia, abscess formation and even gangrene of the obstructed lung tissue. This occurred in 20 cases; pleural effusion or empyema was found less frequently, in only 6 cases.

HISTOLOGY. — The microscopic classification of bronchial carcinoma is often a matter of difficulty owing to the great variety of cell types encountered, even in one and the same tumour. Three main types, however, may be described.

1. The *oatcell* type.—This, in our experience the commonest variety, consists of small undifferentiated round oval or pleomorphic cells possessing only scanty stroma and closely resembling sarcomatous tissue. It is this resemblance which has led to many diagnostic errors in the past; our present-day recognition of the true nature of these tumours helps largely to account for the alleged increase in bronchial carcinoma generally. 60 per cent. of our cases were of this type.

2. The *columnar-cell* type.—Histologically this is a true adeno-carcinoma, sometimes producing mucin and frequently showing a papilliform arrangement; occasionally the cells are grouped in solid alveolar formation.

3. The *squamous* type.—This is a rarer form, consisting of squamous epithelium usually of an undifferentiated type, in which horn production is not prominent, although cell nests may occur. It probably arises from an area of squamous metaplasia following chronic inflammatory lesions, since squamous epithelium is not a normal constituent of bronchial mucosa. Only three of our cases were of this type.

Metastases.—In addition to the almost invariable involvement of the tracheo-bronchial lymph glands, metastases from bronchial carcinoma are generally numerous and wide-spread. The relative frequency of secondary deposits in our 32 cases was as follows :—

TABLE II.

Tracheo-bronchial lymph glands	31	cases.
Abdominal and other lymph glands	18	,,
Liver	13	,,
Lungs (away from main growth)	9	,,
Adrenals	9	,,
Bones	4	,,
Kidneys	4	,,
Brain	3	,,
Pancreas	2	,,
Ovaries, skin, thyroid, etc.	1	case.

In some cases the first symptoms noted have been due to the metastatic deposits, and not to the primary growth itself. Thus a woman of 36, admitted for jaundice, abdominal pain and vomiting, was found at post-mortem to have massive deposits in the pancreas and liver, and an insignificant bronchial primary growth which was unsuspected during life. Similarly, sciatic pain and a thigh tumour were the first symptoms

in a man of 54, who later suffered a spontaneous fracture of the humerus, both due to secondary growth from a small primary in the left bronchus. In other cases mental symptoms developing in the course of atypical "pneumonias" served to strengthen the clinical suspicion of malignant lung disease, while a further case in the writer's recent experience (not included in the present series) presented itself primarily as one of acute mania; at post-mortem the brain was found riddled with secondaries from a small bronchial tumour which had given rise to no symptoms whatever during life. It is probable that brain secondaries occur more frequently than is indicated in the above table, since this organ was examined in less than half the total number of cases. It will be seen that deposits in the adrenals are relatively common, a fact which is no doubt due to their close proximity to the diaphragmatic lymphatics. Seven of the 9 cases showed bilateral involvement; in 3 of these the more rapid clinical course with marked asthenia and skin pigmentation was undoubtedly due to malignant destruction of these glands.

LABORATORY DIAGNOSIS.—As this disease is rapidly progressive, and soon passes beyond the stage where treatment is helpful, it is obvious that the earliest possible diagnosis is essential if any treatment is to be of benefit. The histology of invaded lymph glands or secondary skin nodules is, of course, merely of academic interest, since by this time the case is beyond hope. Examination of pleural or other effusions for malignant cells is rarely helpful, partly because the fluid collection usually occurs late in the disease, partly since malignant cells cannot as a rule be identified with certainty by ordinary staining methods. There are two other procedures, however, which are

much more likely to afford early information. One is the microscopic examination of a fragment of tumour tissue removed by bronchoscopy. In four recent cases we were able thus to identify the type of growth and clinch the diagnosis at a comparatively early date. The other is the microscopy of the blood-stained sputum, which is generally an early sign of bronchial carcinoma. Such sputum, making its appearance as soon as ulceration occurs in the affected bronchus, frequently contains malignant cells, but very rarely fragments large enough for sectioning. In the search for these cells ordinary staining methods have not been very helpful, but specimens treated by the wet-film method of Dudgeon and Wrigley give excellent preparations in which they may often be identified. In a valuable recent paper (*Jour. Laryng. and Otol.*, 1935, 50, 752) these workers reported that in 68 per cent. of 38 proved cases of carcinoma of lung or larynx it was possible by this method to establish the diagnosis from examination of the sputum, and in the majority of cases to distinguish the histological type of growth present. We have lately had an opportunity of applying the method in four suspected cases, in two of which typical "oat-cells" were detected in the films; in one of these the diagnosis was further confirmed by histology of a fragment removed by the bronchoscope. There is no doubt that the method represents a great advance and should be widely known, for unless the diagnosis of bronchial carcinoma is established at the earliest possible moment surgical cure is manifestly impossible, and even palliative treatment has slender hope of success.

CARCINOMA OF THE BRONCHUS.

The Treatment of Carcinoma of the Lung.

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Many obstacles must be faced in treating this condition. I shall not attempt to generalize, but shall describe the results of 14 cases which I have seen since 1930. These cases were sent to me either with a view to surgical treatment or on account of metastatic deposits.

The most radical treatment of carcinoma of the lung is by lobectomy. This, unfortunately, is rarely possible, partly from difficulty in early diagnosis and partly owing to the original site of the lesion. The lesion usually starts in the bronchus, making a radical excision almost impossible. Only 10 per cent. of cases (according to Lilienthal) originate in the parenchyma.

Lobectomy being so rarely possible, treatment with radium has been tried. Surface application of radium was found to be unsatisfactory. It was given in 2 cases: 30 mgm. of radium were applied to the affected side, but had to be removed in a week owing to toxic symptoms (vomiting and tachycardia) apparently due to the breaking down of the neoplasm. Both patients died within a few weeks.

It was therefore decided to try implanting radium directly into the growth, and this has been done in 7 cases. In only one of the series of 14 cases did the

growth start in the parenchyma and give hope of treatment by lobectomy :—

Case 3.—Male, aged 56. Three months' history of gnawing pain in the right axilla together with loss of weight. No cough, no sputum. The X-ray film shows a well-circumscribed shadow in the upper lobe of the right lung. The Wasserman reaction of the blood was positive, and he was treated with iodides. Two months later he was seen by me and the tumour was exposed by thoracotomy. It was found to be fixed by dense adhesions to the parietal pleura, and could not be removed by lobectomy. 20 mgm. of radium were then implanted into the growth and the needles left in position for seven days. A pleural effusion followed which prevented changes in the tumour being observed. He died seven months later from cachexia.

In the remaining 13 cases the growth started in the bronchus, at the hilum. In 5 of these cases implantation of radium needles by open operation was tried. The anæsthetic used was intra-tracheal ether. The method of approach varied.

Intercostal thoracotomy.—For tumours of the lower lobe of the lung, or if lobectomy is under consideration, an intercostal thoracotomy is preferred. This is performed by Shenstone's technique. An intercostal incision is made through the sixth or seventh space, starting from behind the inferior angle of the scapula and ending in front at the costal cartilages. The pleura having been opened, a rib-spreader is introduced. If more room is required the rib above the incision is divided at its vertebral end. The radium needles already threaded are then inserted into the circumference of the tumour, completely surrounding it as far as possible.

With regard to the risk of this operation, in only one case was death hastened. This was not due to the exposure, but to the radium setting up gangrene in an infected lung.

Case 4.—Male, aged 58. Admitted December, 1933. History of 12 weeks' pain in the right side. Two weeks blood-stained sputum. Losing weight. Pleural effusion present, blood-stained on aspiration. Operation by intercostal thoracotomy: the inferior lobe of the right lung was found adherent to the diaphragm and a tumour felt at its hilum. Fifteen 1-mgm. needles of radium inserted and left in for ten days. The patient died thirteen days from the date of operation. Post-mortem showed extensive carcinoma of the bronchus with gangrene of the right lower lobe and secondary growths in the glands round the pancreas.

Another case was treated by similar technique:—

Case 5.—Male, aged 58. Admitted September, 1935. Illness started with influenza attack three months before, followed by blood-stained expectoration. On admission, dullness over the upper lobe of the left lung. Bronchoscopy and biopsy by Mr. Scarff gave uncertain result. X-ray showed ground glass opacity of the upper area of the left lung. The left upper lobe was exposed by intercostal thoracotomy and was found to be fixed to the chest wall by fine adhesions. These adhesions were separated and 14 mgm. of radium were introduced and left in for seven days. X-ray taken some weeks later showed complete opacity of left side of chest. The hæmoptysis continued. He died five months later from cachexia.

Anterior mediastinotomy.—Hoping to improve on these results, another method of approach was tried.

When the tumour is situated at the hilum of the lung a more direct access is obtained by anterior mediastinotomy. This, of course, means dividing the sternum. Bryant's trap-door incision was tried; this gives rather a limited exposure and the possibility of opening both pleural cavities.

Dunhill's modification of Milton's vertical incision through the sternum is better. Having divided the sternum, it is necessary to open the pleural cavity on the side of the tumour. The radium needles are then introduced, surrounding the tumour as completely as

possible. Owing to the resulting pneumothorax, removal of the needles has not been found difficult. This is in marked contrast to radium in the peritoneal cavity, where adhesions rapidly form. Irritation of the pleura with resulting pleural effusion is much less marked with mediastinotomy than by intercostal thoracotomy. Three cases have been treated by this technique.

Case 6.—Aged 39. Three months ago had a cough for a month. Sent up to hospital for gastric symptoms. Two months' vomiting, a half to one hour after meals, relieved by vomiting. Lost 1½ stone in six months. X-ray shows ground glass opacity of left upper lobe of lung. Bronchoscopy and biopsy by Mr. Scarff; epithelioma. *Anterior mediastinotomy.*—10 mgm. radium inserted and left in for seven days. Case too recent to report result.

Case 7.—Female, aged 38. History of swelling in the right arm, noticed in May, 1930, ten weeks before admission; three weeks' dyspnœa and stridor; sputum thick and lumpy. On admission acutely ill with dyspnœa, inability to swallow and difficulty in expectoration. X-ray of chest showed shadow bulging to the right of the sternum at its upper level. Bronchoscopy by Mr. Scarff showed a projection pushing in the wall of the right bronchus. Four days later the dyspnœa became so urgent that anterior mediastinotomy was performed. The right pleural cavity was opened and a vascular fixed tumour was found bulging from the mediastinum. Ten 1 mgm. needles of radium were inserted and left in for ten days. The acute symptoms were relieved by the mediastinotomy. An X-ray film taken three months later shows the tumour shadow to have nearly disappeared. Her present symptoms, that is five years later, are shortness of breath on exertion and cough at night. There is a dilated vein on the right side of chest. The right arm is increased 1½ inches in circumference, due to œdema. An X-ray with lipiodol shows that the upper lobe of the bronchus does not fill.

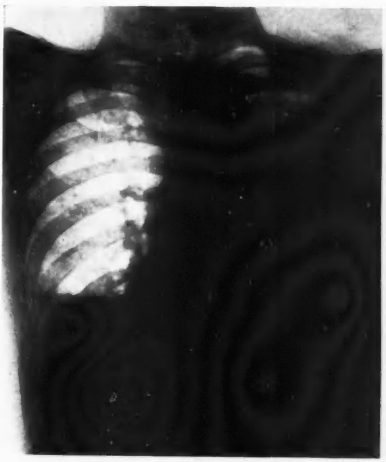
As no biopsy was done there is no actual proof that this tumour was a carcinoma. Clinically, at the time, this diagnosis was suggested. There is no doubt that the mediastinotomy relieved the acute

PLATE XV

CASE 3.—Parenchymatous growth of right upper lobe.

CASE 3.—Radium needles in situ. Pleural effusion following intercostal thoracotomy.

CASE 6.—Incision used for anterior mediastinotomy.

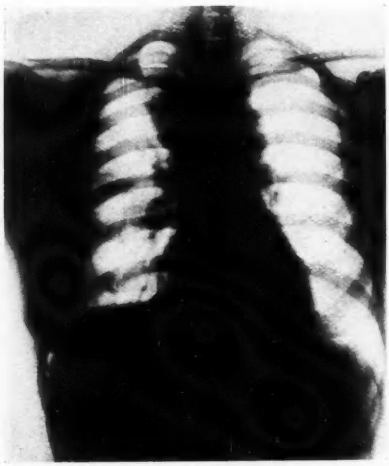


Left bronchial carcinoma.

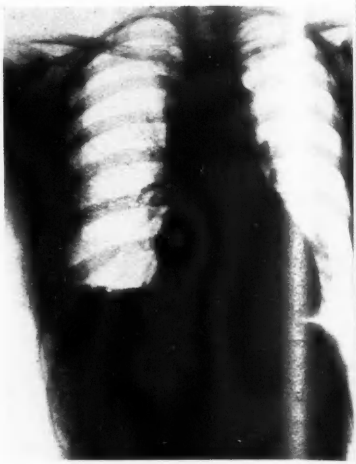
CASE 6.—Radium needles in situ; introduced by anterior mediastinotomy.

NOTE.—The position of the needles is shown by white marks: in the actual skiagram they are of course *dark* shadows.

PLATE XVI



CASE 7. — Showing growth protruding from upper right mediastinum.



CASE 7.—Three months after insertion of radium needles growth disappeared

symptoms, and that the radium caused the tumour to disappear.

Case 8.—Male, aged 61. Admitted October, 1935, with three months' cough and hæmoptysis. Losing weight. Two months' pain in the chest. Sputum showed cells very suspicious of malignancy. X-ray showed shadow with ill-defined outline growing from the left hilum. Bronchoscopy by Mr. Scarff, biopsy finding negative. Treated by anterior mediastinotomy. Five 1 mgm. needles of radium inserted and left in for ten days. The treatment has stopped his hæmoptysis. Mr. Scarff is introducing more radium by bronchoscopy. In the future we hope to treat more cases by this double method of approach.

CASES UNSUITABLE FOR RADIUM TREATMENT.

Abscess formation may dominate the clinical picture. The diagnosis of malignancy may then become extremely difficult. The abscess may be either in the lung or in the pleural cavity. Surgical treatment is confined to drainage of the abscess. Two cases occurred in this series :

Case 9.—Male, aged 54. History of two weeks' dyspnœa. Admitted with afebrile empyema. Needled, pus found, culture pneumococcal. Resection of rib with drainage. Rapidly developed cerebral and mental symptoms with hemiplegia. Post-mortem revealed primary carcinoma of bronchus with secondaries in brain, liver and suprarenals.

Case 10.—Male, aged 46. Six months' history of tightness in the throat and cough and irregular temperature. X-ray showed large, irregular shadow in upper lobe of left lung. Needling failed to find pus. Operation, local rib resection with drainage of lung abscess. Culture, pus staphylococcal. Died of cachexia.

Of the remaining 4 cases two patients were too ill when first seen : one of these died from acute hæmoptysis, and the other died in eighteen days with secondary growths in the liver. In this case the history was of six weeks' abdominal pain, hæmoptysis starting only six days before death. In the other 2 cases the symptoms were due to metastatic growths.

Case 13.—Male, aged 54. Symptoms, pain in right thigh. Spontaneous fracture whilst being examined. X-ray showed rarefaction of right femur, with absorption of cortex, but no expansion. Left humerus showed suspicious rarefaction. Four days later this also fractured. He died in eight weeks. Post-mortem showing carcinoma of bronchus.

Case 14.—Male, aged 70. For six months felt lump in chest wall; losing weight; chronic cough for eight years. Two years' sputum, blood-stained at times. On admission, hard irregular tumour attached to the right pectoral muscle, not fixed to chest wall. X-ray shows shadow growing from right hilum. Biopsy of tumour, secondary epithelioma. Patient died two months later from cachexia.

SUMMARY.

1. Lobectomy is the best treatment for carcinoma of the lung, but it can only be done at a relatively early stage, and if the lesion is in the parenchyma.

2. In carcinoma of the hilum, if implantation of radium into the growth is under consideration, then access by anterior mediastinotomy gives the most direct approach and causes less irritation to the pleura.

3. In some of the cases the diagnosis of malignancy can only be made by exploration. If not malignant the tumour can then be enucleated. Non-malignant tumours in this site, if not removed, are ultimately fatal.

A FATAL CASE OF MENINGITIS DUE TO INFECTION OF THE SPHENOIDAL SINUS BY PFEIFFER'S BACILLUS, WITH A SHORT REVIEW OF METHODS OF TREATMENT.

BY

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AND

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CASES of meningitis attributed to infection by organisms resembling Pfeiffer's Bacillus are not uncommon, and over 300 have been reported. The mortality is given by Bloom[1] as 92 per cent., but 46 cases of recovery are on record.

Meningitis due to Pfeiffer's Bacillus is usually stated to be a " primary " infection of the meninges, but the experimental work of Blake and Cecil on the production of broncho-pneumonia by this organism makes it appear probable that sinus infection must be very common.

The occurrence of this form of meningitis, however, is sporadic, and only rarely associated with epidemic influenza, which is now regarded as being due to a filter-passing organism.

This sporadic incidence of the disease has resulted in treatment remaining empirical or a matter of desperation.

The recorded cases of recovery during the last ten years, and the methods of treatment, are as follows :—

Author.	*Year.*	*Age.*	*Sex.*	*Treatment.*
Turner. *Jour. Iowa Med. Soc.*, 16, 490.	1926	6½ years.	F.	Lumbar punctures, antimeningococcal serum.
Signorelli. *Proc. Louisiana State Pediat. Soc.*	1929	7 years.	M.	Lumbar punctures, antimeningococcal serum.
Bloom. *New Orleans Med. Jour.*, 83, 455.	1931	10 months.	F.	Lumbar punctures, antimeningococcal serum.
Dabney. *Laryngoscope*, 41, 14.	1931	15 years.	M.	Lumbar punctures, methenamine.
Gibbens. *Lancet*, 1, 291.	1931	5 years.	F.	Lumbar punctures, antimeningococcal serum.
Mastner and Davidson. *Jour. Michigan Med. Soc.*, 29, 311.	1931	2 months.	F.	Spinal block, laminectomy.
Johnson. *Jour. Med. Soc., New Jersey*, 29, 311.	1932	2 years.	F.	Lumbar punctures.
Hart. *Canadian Med. Assoc. Jour.*, 27, 163	1932	3 years.	F.	Lumbar punctures.
Hart (second case). *Canadian Med. Assoc. Jour.*, 27, 163.	1932	5½ years.	F.	Lumbar punctures, convalescent serum.
Wood. *Brit. Med. Jour.*, 101, July.	1932	6 years.	F.	Lumbar punctures, antimeningococcal serum.
Needles. *Jour. Amer. Med. Assoc.*, 99, 1342.	1932	29 years.	M.	Lumbar punctures, antimeningococcal serum.
Ward and Wright. *Jour. Exp. Med.*, 55, 233.	1932	2½ years.	M.	Lumbar punctures, anti-influenzal serum.
Applebaum. *Jour. Amer. Med. Assoc.*, 102, 513.	1933	14 years.	M.	Lumbar punctures, antimeningococcal serum, anti-influenzal serum.

Author.	*Year.*	*Age.*	*Sex.*	*Treatment.*
Applebaum. *Jour. Amer. Med. Assoc.*, 102, 513.	1933	28 years.	M.	Lumbar punctures, antimeningococcal serum, anti-influenzal serum.
Applebaum. *Jour. Amer. Med. Assoc.*, 102, 513.	1933	38 years.	M.	Lumbar punctures, antimeningococcal serum, anti-influenzal serum.
Pittman. *Jour. Exp. Med.*, 58, 683.	1933	2 years.	F.	Intraspinal specific Type B serum.
Robertson. *St. Bart's. Hosp. Jour.*, 40, 10.	1933	2½ years.	F.	Lumbar punctures.
Rittenberg. *Jour. Amer. Med. Assoc.*, 102, 1674.	1934	8 years.	F.	Lumbar punctures, anti-influenzal serum.
Duncan and Webb. *Jour. Pediat.*, 12, 216.	1934	8 years.	M.	Lumbar punctures, antimeningococcal serum.
Dyke and Little. *Lancet*, 6, 1392.	1934	22 years.	M.	Lumbar punctures.
Applebaum. *New York State Med. Jour.*, 35, 215.	1935	47 years.	M.	Intrathecal antimeningococcal serum.
Faust and Stein. *Jour. Pediat.*, 52, 743.	1935	11 months.	M.	Forced spinal drainage.
White. *Canadian Med. Assoc. Jour.*, 34, 163.	1936	3 years.	F.	Intraspinal meningococcal and anti-influenza sera.

This list is compiled from the references given by Neal, Jackson, and Applebaum,[2] Faust and Stein,[3] and an additional recent case report.

Repeated lumbar puncture alone or combined with antimeningococcal serum intrathecally and intravenously appears to be the usual method of treatment.

Anti-influenzal serum, an anti-bacterial serum obtained from horses immunized with suspensions of

living Pfeiffer's Bacillus isolated from fatal cases of "influenzal" meningitis, is now available in America, and has been used in two cases of recovery reported recently.

In both cases treatment was commenced with antimeningococcal serum.

It is not possible to ascertain the number of fatal cases in which anti-influenzal serum has been employed.

Rittenberg's case[4] (1934), after treatment with antimeningococcal serum during the first two days, received 15 c.c. anti-influenzal serum intrathecally every 8 hours for two days, then every 12 hours for five days, and subsequently once daily.

A total of 750 c.c. of cerebrospinal fluid was removed during treatment and replaced by 565 c.c. of serum.

The treatment in White's[5] case (1936) is summarized as follows: 170 c.c. antimeningococcal serum intraspinally, 40 c.c. intravenously, and 100 c.c. intramuscularly during the first five days without any clinical evidence of improvement being noted.

Anti-influenzal serum was then employed, 30 c.c. being given intraspinally on two successive days. Improvement is said to have been immediate. The "forced spinal drainage" method used by Faust and Stein (1935) is remarkable in that during the first 12 hours 1,325 c.c. of hypotonic saline were given intravenously to an infant of 11 months, yielding 125 c.c. of turbid cerebrospinal fluid by continuous drainage of the theca. The cell count fell from 1,300 cells per c.mm. to 75 cells per c.mm. Following this, the saline was given subcutaneously for some days, and again intravenously in large quantity when an exacerbation of symptoms occurred. The final outcome was a complete recovery.

The following fatal case of Pfeiffer's meningitis,

coming under the observation of one of us (C.E.F.), may perhaps emphasize the lack of a readily available specific serum. The probable source of infection in the sphenoidal sinus suggested clinically and observed post-mortem is a feature :—

Case Report.

A female child, aged 3 years and 10 months, was admitted to the Hospital after an illness of three days characterized by sore throat, severe headache, and vomiting.

The patient was lethargic and delirious ; head retraction, a positive Kernig's sign, and extensor plantar responses were noted.

Examination of the chest and abdomen did not reveal any evidence of disease. The ears showed no abnormality and there was no rash.

Lumbar puncture showed a cloudy fluid not under increased pressure, and 5 c.c. of antimeningococcal serum were given intrathecally.

Two days later lumbar puncture showed increased pressure, and during the following ten days 160 c.c. of cerebro-spinal fluid were withdrawn and replaced by 50 c.c. of normal horse serum.

On the third day of treatment a persistent internal squint developed, but plantar responses became flexor.

Head retraction and Kernig's sign remained positive throughout, and dehydration became marked.

Signs of broncho-pneumonia appeared on the 17th day of the illness, and she died suddenly two days later.

Laboratory Investigations.

Specimens of cerebro-spinal fluid were examined on six occasions, and in each numerous pus cells, increasing amounts of protein and globulin, with chlorides decreasing to 650 mgrms. per cent. were found.

All specimens contained large numbers of small pleomorphic gram-negative bacilli, many being intracellular.

A scanty growth of small dew-drop colonies appeared after twenty-four hours' incubation on fresh blood and "chocolate" agar plates, becoming fairly profuse after a further twenty-four hours' incubation.

No growth was obtainable on plain agar, but hydrocele fluid added to the blood agar appeared to accelerate the rate of growth.

The organisms did not ferment any of the usual laboratory sugars. Suspensions of the organisms injected intravenously into rabbits produced no untoward effects, and no agglutinins were demonstrable in their sera. The organism can therefore be regarded as Pfeiffer's Bacillus on the morphological and cultural characteristics.

POST-MORTEM REPORT.

Brain.—A thick purulent exudate covered the structures beneath the tentorium and extended in smaller amounts along the sulci on to both cerebral hemispheres.

Similar exudate in small quantity was present around the choroid plexuses of the lateral ventricles.

Smears and cultures contained the same organism isolated from the cerebro-spinal fluid during life which corresponds with Pfeiffer's Bacillus.

Cranial Sinuses.—The frontal sinuses and middle ears were found to be clean. The sphenoidal sinus contained thin pus from which a growth of Pfeiffer's Bacillus was obtained.

Lungs.—Both lower lobes presented broncho-pneumonic consolidation in their more peripheral zones.

Other Organs showed degenerative changes only.

CONCLUSIONS.

It is suggested that this is a case of meningitis caused by Pfeiffer's Bacillus, and originating as an infection of the sphenoidal sinus.

The desirability of a more detailed study of such cases is urged with a view to ascertaining the value of a more specific treatment and its availability.

We are indebted to Mr. T. H. C. Benians for the animal inoculations, and to Mr. Ivor Lewis, Medical Superintendent of our Hospital, for permission to publish these notes.

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[3] Faust and Stein, *Arch. Pediat.*, 52, 743, 1935.

[4] Rittenberg, *Jour. Amer. Med. Assoc.*, 102, 1674, 1934.

[5] White, *Canadian Med. Assoc. Jour.*, xxxiv, 163, 1936.

SURGICAL CLINICS IN SCANDINAVIA.

BY

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DURING a recent visit of three weeks' duration to the Northern Capitals, I had the privilege of seeing something of the work in about ten important hospitals. It would be impossible to overrate the kindness and courtesy of one's professional brethren everywhere. They gave up hours to show me all round their wards, discussing the diagnosis and treatment of every case of interest, let me watch their operations, and at Oslo and Upsala I was invited to give a lecture to the Professor's class in Surgery.

At Helsingfors I addressed the principal Medico-Chirurgical Society in Finland, called "Duodecim," because it was founded sixty years ago by twelve students to promote the advancement of medical teaching in the Finnish tongue. For a long time there were never more than twelve, but now the membership has grown to about a thousand medical practitioners. The numbers present at the meeting, the preliminary proceedings, and the general deportment were exceedingly like that at a gathering of our Bristol Society. I spoke in English, but I doubt if many of them understood what I said. I thought a translator would have improved matters, but none

was forthcoming. They had never had an English lecturer before, and I did not see the names of any English surgeons in the visiting book of any of the Helsingfors hospitals, though there were plenty in the Swedish books.

At the Elim Krankenhaus in Hamburg Dr. Hollenbach did a toxic goitre under a local anæsthetic, pantocaine, given with pressure of 1½ atmospheres by means of a screw syringe and very long rubber tube. The anæsthesia comes on immediately, is very good, and there is less bleeding than usual. Professor Holst at Oslo did a beautiful operation for a very difficult stomach case under spinal anæsthesia.

I also saw a hospital at Baerum (near Oslo), twelve miles out in very pretty country, for 100 cases of tuberculosis of bones and joints. I expected to find all children, but to my surprise there were 75 per cent. of adults, including four or five patients with sacro-iliac tuberculosis, treated by the Smith-Petersen operation. The hospital is ideal for sun-bathing in the summer, and well equipped with X-rays and ultra-violet light. I was informed that surgical tuberculosis in children is becoming uncommon in Norway, and that bovine tuberculosis is rare. A good many of the cases come to amputation.

At Upsala I was received with extreme kindness by Professor Nystrom. He does nearly everything under local or spinal anæsthesia, at which Scandinavian clinics are very skilful. High spinal anæsthesia is obtained by a fractional method, a fresh dose being given every five minutes until sensation is lost up to the costal region. The operation was on a young man with a gastric and a duodenal ulcer; partial gastrectomy with duodenectomy was performed and the anastomosis made by the Billroth I technique,

PLATE XVII

HOSPITAL FOR TUBERCULOSIS OF BONES AND JOINTS
AT BAERUM, NEAR OSLO.

which is seldom used in England, but looked very good. In a case of goitre one advantage of local anæsthesia was demonstrated by making the patient say "Ja" whenever a forceps was applied anywhere near the recurrent laryngeal nerve, so that it would be practically impossible to damage it.

I was only able to see Professor Key at the Marie Hospital, Stockholm, for half an hour, but he showed me an interesting case of a condition which though rare represents a first-class surgical emergency and might occur in the practice of any doctor. A woman with chronic heart disease had been seized with sudden severe pain in the right thigh and leg and the limb became whity-blue, cold and pulseless. An embolus was extracted, about one inch long, from the femoral artery, and the limb recovered without gangrene. One has only a few hours to spare if this happy result is to be obtained. Strange to say, this was Key's forty-fifth case!

A morning at the Radium-hemmet with Dr. Berven was exceedingly instructive. He took me round about sixty cases and discussed them all. The premises are old, and next year a new Radium-hemmet is to be opened. Many of these cases are treated not by radium but by deep X-ray therapy, especially when the growth is not superficial, such as bone sarcoma, malignant glands of the neck, cancer of the prostate, breast, thyroid, etc. There was a female patient with cancer of the œsophagus who had come up to show herself, with no trace of the disease six months afterwards, but I was told that such a happy result is rare, and recurrence probable. Radium needles are still used for skin cancers, rodent ulcers, and some non-malignant conditions, also to leave in the wound after diathermy

for growth of the maxilla, but not for the tongue, mouth, external genitals, and breast. Growths of the tongue and mouth, some skin cancers, and superficial growths generally, are treated by tele-radium, that is to say, several applications of a radium bomb. They have two; the one I was shown contains 5 grammes, nominal value £60,000 (less at present prices). Breast cases are all sent to the surgeon, if operable, but X-rayed before and after.

Thyrotoxicosis is treated normally by surgery, but very mild cases, and very severe ones, receive X-ray therapy.

I saw many cases with Professor Brofeldt and Dr. Nylander at Helsingfors, but the type of disease and the treatment given were much the same as in modern English clinics. Gonorrhœal joints are common; I found four amongst about one hundred patients.

The principal interest at Helsingfors was the Gynæcological Hospital, put up regardless of expense, after great trouble had been taken to think out and perfect every detail. Professor Wichmann and his lady colleague, Professor Leidenius, spent two hours showing me everything. They have bestowed much thought on the place and are justifiably proud of it. I doubt if there is such another hospital in Europe for attention to detail. Only a very few out of hundreds of small points can be mentioned here. The wards are two- or four-bedded. The walls and ceiling are painted slightly different colours to rest the eyes, and a patient recovering from an anæsthetic is always turned towards a quiet shade of green. The electric lights are so shaded that one patient can read and another sleep. The night-nurse called at night turns on a wall-light almost on the floor, so that it does not fall on the patient's eyes. When Dr. A. or B. or

C. or D. is wanted, a switch is pressed, which lights a score of lights all over the hospital; the particular light calls that particular doctor; the switch also puts a telephone through from every floor to the ward where he is required. Instead of sending a prepared plateful of food to each patient, a hot-lock wagon is sent round, and she helps herself to whatever she likes and as much as she likes. This simple improvement pleases the patient, and has cut the expenditure on food by one-third. There is a special kitchen for patients on a special diet.

Cold sterilized water is delivered all over the hospital and to each ward service-room, not by the heating system, but by forcing it through a filter. In each room there is a round iron disc in the wall, about one foot across, with a spout and tap attached, and behind the disc is an unglazed porcelain filter which is completely germ proof. It needs to be changed about once a month, but the cost is trifling. By this means there is a great saving of expenditure on fuel. The Professor remarked to me that it is really a French process used in wine making, but taken over by certain German hospitals, and he added that "when the Germans take over anything from the French, you may be sure it is pretty good."

Even the bed-pan service has been worked out on a system, to give each patient a warmed, cleansed, sterilized metal pan; they are stored on a wagon ready for use. All food and other wagons are provided with bumpers to protect the walls.

One hospital I saw was unfinished; it was as tall as an American skyscraper, I believe ten storeys. The Scandinavians have learned that it makes it much easier for the staff if they can be transported by lifts instead of having to walk immense distances

many times a day on the ground level. The architecture seemed very good. The lifts were lined by the most beautiful wood I have ever seen, a blue satiny kind of birch.

One came away with the impression that British practitioners ought to pay more attention to Scandinavian methods.

REPORT OF THE COMMITTEE ON THE SCOTTISH HEALTH SERVICES.

BY

THE EDITOR.

IN our Spring issue this year (Vol. LIII, 199, p. 39) we were privileged to publish a Synopsis of the Memorandum submitted by the Voluntary Hospitals in Glasgow and the West of Scotland to the Departmental Committee of Enquiry into the Scottish Health Services. The Report of the Committee has now been published,* and it is probable that legislation will follow which may foreshadow similar legislation for England and Wales.

Part III of the Report deals with "Medical and Allied Services." On the "Rôle of the Family Doctor" the Committee finds that the work of the general medical practitioner is not effectively linked up with that of the main statutory services, and agrees that this link is vital to any comprehensive policy for the promotion of the health of the people. The family doctor should be in ordinary practice the health adviser, and the training of the medical student should be such as to produce the preventive outlook. Without the assistance of the family doctor as health adviser the statutory medical services cannot, to the full extent, promote and safeguard the health of the people.

**Report of the Committee on Scottish Health Services.* Department of Health for Scotland. Price 6s.

The Committee has no doubt that large numbers of the population who are not included in the National Health Insurance Scheme do not receive adequate medical attention. One effect of this is to increase the pressure on the hospital out-patient departments, another is to add to the cost and reduce the efficiency of the statutory medical services.

In spite of school medical services many children are not treated at all, sometimes because of parental neglect, but more generally because of the cost of obtaining appropriate medical treatment. "We find," says the Report, "that inadequacy of general medical attendance adds to the cost, interferes with the efficiency, and prevents the sound development of many of the medical services provided by statute." It is imperative for the State to frame a policy to meet the needs of the dependants of insured persons and others to lay down the lines along which the medical services should develop.

While the plan of whole-time medical officers of health and certain other specialists working for the local authority is a sound and valuable principle the Committee regards it as obvious that the development of whole-time service into the whole field of medical practice would be unsatisfactory. The co-ordinated and extended general practitioner service should be built up on the basis of contract with the private general practitioner, and remuneration should be by capitation fees.

The maternity service should be based on the doctor and midwife acting in concert, supplemented by consultants and institutional facilities. But more practical training of doctors and midwives, along with other measures, are needed to raise the general standard of midwifery practice.

Child welfare work is seriously handicapped by the inadequacy of arrangements for home medical and nursing attention. The general practitioner should become an integral part of child welfare service and schemes should be developed in co-operation with him. So, too, the work of the school health service is seriously hampered by the inadequacy of medical supervision at home: here again domiciliary attention and supervision must be secured by co-operation between local authorities and family doctors. The Poor Law Medical Service is found unsatisfactory, and in the view of the Committee, cannot be improved so long as a separate domiciliary medical service is maintained for persons only when they are destitute. "Poverty," says the Report (with Scottish forthrightness), "must not be permitted to interrupt the continuity of medical supervision by the family doctor." The Committee, hoping for a review of the law *of settlement and recourse* would welcome any changes that will make treatment available to all alike without any distinction between the general public and the poor.

As regards the National Health Insurance Scheme the Committee is convinced of its success. The proposals contained in the Report contemplate a co-ordinated and complete medical service in which the general practitioner, acting normally as family doctor, will act in liaison between the homes of the people and the facilities provided by statutory and other agencies.

The hospital services are the subject of recommendations, some of which involve drastic alterations. There has been for a long time a serious shortage of hospital facilities which militates against the ideal of early treatment, and causes much loss of working time and avoidable expenditure from insurance

and other funds. An adequate hospital service is essential for the public health. The State should foster the voluntary hospital system, but it would be unwise to endeavour to induce the voluntary hospitals to extend their financial commitments much further than at present.

The hospital services should be developed by co-operation of voluntary and statutory hospitals and the public authorities, but, in the main, financial responsibility for making up the shortage should be placed on the local authorities, who should be assisted by special Treasury grants for this purpose.

The State should recognize the services of the teaching hospitals in respect of their providing teaching facilities, and for this purpose a "teaching facilities grant" should be made available. Voluntary hospitals should be exempted from payment of legacy and succession duties, and should be granted remission from rates.

To secure an adequate hospital service in modern conditions and to safeguard voluntary hospitals the hospitals of all kinds must be viewed as a whole, and over wide regions, and must be regarded as one service. For the development of hospital services on co-operative lines and in the interests of the voluntary hospitals, it is essential that the voluntary hospitals should be recognized as an integral part of the national health services, and they should, as a corollary, accept a measure of supervision and guidance from the Department of Health.

The Report is too long to be discussed in detail. The foregoing abstract presents its recommendations as to General Practitioner and Hospital Services. Part III also deals with School Health Service, Infectious Diseases, Tuberculosis, Venereal Diseases,

Mental Health Service, Industrial Health Services, Nursing and Allied Services, Dentistry, Clinics and Diagnostic Centres, and Pharmacy. Part I considers Social and Economic conditions in relation to the Public Health. Part II deals with Heredity, Food, Education, and what are called "Environmental Services" such as Housing, Water Supply, Drains and Sewers, Cleansing and Scavenging.

The comprehensive nature of the Report is thus evident, and its conclusions are supported with considerable unanimity. There is no minority report, and the "reservations" made by individual members of the Committee only serve to emphasize the approval which the Report, as a whole, commands. Its wise recommendations seem to require very little alteration to render them applicable to England as well as Scotland.

Reviews of Books

The Medical Dictator. By MAJOR GREENWOOD, F.R.S., D.Sc., F.R.C.P. Pp. 214. Illustrated. London: Williams and Norgate. 1936. Price 7s. 6d.—This is an interesting series of biographical sketches of various medical men, some perhaps to be accounted great by any criteria in the eyes of all, some only great to a more limited and discerning clientele, and some only, perhaps, great to their friends. Dr. Greenwood (the "Major" is only an unusual Christian name, and is not indicative of any military rank), as the medical statistician, would be inclined to include some people of his own speciality, who are less well-known to the ordinary man in the street, hence the appreciation of William Farr, the originator of accurate medical statistics in England, and of Louis, the exponent of the "Numerical Method." Both of these are interesting sketches. The one we liked least was the most erudite—that of Galen. Two old-time British physicians, John Freind of the seventeenth and eighteenth centuries and Latham of the nineteenth, are interestingly sketched. The other two portraits drawn are of Sir William Osler, most certainly one of the most lovable of men, and of Arthur William Bacot. One suspects that the *raison d'être* of the whole of this little book is the author's desire to pay homage to the memory of the last-named, a close personal friend of his own. He was a business man whose hobby was entomology, and who eventually was able to take up that branch of science as his life work, performing invaluable work upon the transmission of plague by the rat flea, and during the war upon louse-borne diseases, as trench-fever and typhus. He himself fell a victim to the last-named disease during his researches in Egypt. This is by far the best of the sketches, there being a warm personal note necessarily lacking in the others. The mere mention of a medical statistician calls to mind a sort of human ready-reckoning machine, so that one's heart warms to a human note in the most distinguished British member of the class. He seems to have but a poor impression of the mentality, receptivity and even general intelligence of the Fellows of the Royal College of Physicians of past days, and of the rules and regulations of the College itself. It is an interesting

speculation to wonder what the late lamented fellows would have thought and said of a modern F.R.C.P. who thus lightly esteems and even gently ridicules the traditions and history of that august foundation.

British Masters of Medicine. Edited by SIR D'ARCY POWER, K.B.E., F.R.C.S. Pp. xvi., 242. Illustrated. London: Baillière, Tindall & Cox. 1936. Price 7s. 6d.—This series of twenty-four short biographies by various writers appeared originally in the *Medical Press and Circular* during the years 1934 and 1935. Many of the subjects have been written about frequently, for example Harvey, Sydenham, Hunter and Jenner; but there are new comers also, John Floyer of Lichfield, by whose advice Samuel Johnson was taken to be touched for the Evil by Queen Anne, and who wrote on cold bathing, the rate of the pulse and respiration, on blood volume, and ascribed the dyspnœa of asthma to constriction of the bronchi. Robert Willan is another little-known master whose life history is worth preserving. Recognition is also given to many modern masters. William Turner, the Edinburgh anatomist and great administrator, Hugh Owen Thomas and his illustrious disciple Robert Jones, together with Manson, Osler, James Mackenzie and Starling. It is well to be reminded that there have been giants even in our own times. For the biographies we have nothing but praise; they are short, readable and full of interest.

Applied Physiology. Sixth Edition. By SAMSON WRIGHT, M.D., F.R.C.P. Pp. xxxii., 686. Illustrated. London: Oxford University Press. 1936. Price 20s.—The sixth edition of this work will need no recommendation to the vast majority of medical practitioners or students. The fact that six editions have been published in the ten years that have elapsed since this invaluable book was first published is sufficient testimony, if any were needed, to its well-deserved popularity. Physiology is of necessity the basis of all medical work, and any practitioner who wishes to keep abreast of current thought and ideas must maintain his interest in physiology. The new edition is some seventy pages larger than its predecessor on account of the large amount of fresh matter that has had to be included, and in addition many sections have been entirely rewritten in order to bring the whole completely up to date. In this, as in all the previous editions, the clinical significance of the facts described is

constantly stressed. The book is well produced and there is an excellent index. It is a work which could be read with benefit not only by every student but by every practitioner of medicine. To anyone contemplating a higher degree in either medicine or surgery it is simply "essential."

Asthma, Hay Fever and Migraine. By A. G. AULD, M.D. Pp. x, 257. London: H. K. Lewis & Co. 1936. Price 12s. 6d. —Dr. A. G. Auld has collected into a single volume a number of clinical lectures and articles which he has published in various journals since 1885. The majority of these deal with Allergy in its different aspects; that is to say, Asthma, Hay Fever and Migraine form the chief part of the volume. Readers will probably find these chapters the most interesting, since the author relates at some length his experiences with peptone injections, pyrogenic therapy by means of colloidal metals and other methods, and the treatment of hypersensitiveness in various ways. Some of his reprinted papers are only interesting because they show Dr. Auld to have been almost before his time in his physiological approach to the study of medicine. Nowadays every physician must of necessity be primarily a physiologist, but in the eighteen eighties and nineties such an attitude was uncommon. Dr. Auld reprints a very foolish article on "The Roentgen Rays in the Diagnosis of Pulmonary Disease," belittling the value of their aid in physical examination of the chest. The article was written in 1903, and there is nothing to indicate that the author has changed his views or marched with the times, unless the omission of all reference to this article in the index betokens a desire to disown a youthful indiscretion. It is a pity that the proof-reading has been so badly done. Small errors in spelling are irritating and there are too many of them, one or two may be oversights, but the repetition of "intra muscularily" for "intra muscularly" occurs nine times, "collodial" for "colloidal" twice, and there are in addition at least eighteen other mistakes in spelling or type-setting, none of which ought to have escaped the publishers' proof-reader.

Endocrine Organs in Health and Disease. By Sir HUMPHRY DAVY ROLLESTON, Bart., M.D., D.Sc., D.C.L., LL.D. Pp. xii, 521. Illustrated. London: Oxford University Press. 1936. Price 36s.—It cannot be often in these days of rapid progress in medical science that a book of this scope is written by a single author. The title may sound sufficiently

comprehensive ; but it is not necessary to read more than two or three chapters to realize how modest that title is. The book is the outcome of the author's 1933 and 1934 Fitzpatrick Lectures on the "History of the Endocrine Organs," and history is its chief interest. Each chapter is devoted to one of the endocrine glands, and commences with a remarkably full historical review of its structure and function. At times the historical sections may to some tend to become somewhat bald (this is no fault of the author's) but they are pleasantly relieved here and there by miniature biographies, principally of nineteenth-century physicians and others who played important parts in the development of our knowledge of the glands in question. The historical portion of each chapter is followed by descriptions of the abnormalities and syndromes associated with the organ, their ætiology, diagnosis and treatment, each part with its own selected bibliography. The result is a remarkably comprehensive account of past and present-day endocrinology. The book has been brought as much up-to-date as possible since the delivery of the Lectures, and one cannot but admire the way in which the author has so successfully dealt, for example, with the pituitary and the gonads in our knowledge of which such rapid advance is now being made. However, the general reader will probably be most struck by the masterly review of the pioneers and their discoveries in the various branches of the subject to which Sir Humphry Rolleston's historical taste has done full justice. There is a good index and the book is well printed.

The Anæmias. By JANET M. VAUGHAN, D.M., M.R.C.P. Second Edition. Pp. xiv., 309. Illustrated. London : Oxford University Press. 1936. Price 12s. 6d.—In view of the rapid progress which is being made in the science of hæmatology, it is by no means too soon to welcome a second edition of this useful book. The authoress does not claim that any great discoveries have been made since 1934, but much work that was then hypothetical has been confirmed and consolidated. The scope and standard of the book are definitely beyond that required by the medical undergraduate, but it is eminently suitable for those working for higher degrees, for the pathologist and clinician alike. Throughout, there is a close correlation of the medical and pathological aspects of diseases ; not only the blood picture and morbid anatomy, but the ætiology, treatment and differential diagnosis are fully dealt with. The classification of anæmias, the chapters on the leuco-erythroblastic anæmias,

and megalocytic hyperchromic anæmias associated with gastro-intestinal lesions, and the comprehensive bibliography are of particular interest. Diagrams and illustrations are clear, and, within the scope of the book, adequate, and, apart from one or two trifling errors, the text is lucid and interesting. Theories are put forward logically and persuasively, but without dogmatism, and the book can be cordially recommended to those interested in blood diseases.

A Short Practice of Surgery. By HAMILTON BAILEY, F.R.C.S., and R. J. MCNEILL LOVE, M.S., F.R.C.S. Third Edition. Pp. viii., 995. Illustrated. London: H. K. Lewis & Co. 1936. Price 28s.—The appearance of another edition of this work within a year bears eloquent testimony to its popularity among medical students. It is the most succinct and comprehensive guide to surgery. The style is interesting and lucid, and frequent classifications interspersed in the text afford valuable aids to memory. The book is well furnished with information on the recent advances in procedures such as blood transfusion, cystoscopic work and bone and joint surgery. The closing chapter on whitlows and their complications is a masterpiece in clarity of press and picture. There is still some room for improvement even in this splendid production. Some of the orthopædic pages present the treatment of the renowned problems of deformities in a conventional and optimistic way which is apt to mislead. For instance talipes, hallux valgus, etc., still defy and embarrass even the experts. It would be cause for congratulation of the authors if such inveterate problems were given more adequate attention. The necessary space for such alterations might be gained without lengthening the volume if the student were spared the discussion on the delayed treatment of appendicitis—a dangerous sphere for any but the consulting surgeon—and the story of the hydatid cyst. This last is such a rarity in practice that it is better left to post-graduate works or to the pathologist. Despite its drawbacks, which are not peculiar to this textbook, there is no doubt that the student who masters it will please both examiner and patient.

Vascular Disorders of the Limbs. By Sir THOMAS LEWIS, F.R.S., M.D., D.Sc., LL.D., F.R.C.P. Pp. xii., 111. London: Macmillan & Co. 1936. Price 6s. 6d.—This book is a very valuable presentation of our present knowledge of circulatory disturbances in the limbs, in elucidating which Sir Thomas

Lewis and his colleagues at University College Hospital have played such a large part. The various vascular disorders that may affect the limbs are described accurately and concisely, and the reader is shown how to investigate and treat these conditions without the use of any more elaborate piece of apparatus than a sphygmomanometer, and the "dorsal surface of the middle phalanx of the flexed finger." The latter, we are told, is the best instrument for comparing the temperature of two limbs. Starting with a description of the anatomy and physiology of the circulation in the limbs, the author proceeds to describe the various obliterative and vascular diseases that may be met with and their differentiation and treatment. This is a book to be read by all students and practitioners of medicine, whether they be in general practice or consulting medicine or surgery. In addition, it is a beautiful example of the value of accurate and carefully controlled clinical observations, *i.e.* of true "scientific" medicine.

The Relief of Pain. By HAROLD BALME, M.D., F.R.C.S. Pp. xvi., 392. London: J. and E. Churchill. 1936. Price 12s. 6d.—The author devotes the earlier chapters of his book to general considerations of the problems of pain, considered in the light of physiology and anatomy. He then passes on to an attempt to find a classification of types of pain, a difficult thing to do, but obviously useful clinically. Then follows a detailed consideration of individual problems in treatment, with carefully considered therapeutic suggestions. He leaves hardly any clinical field out of his purview. In the latter part of the book there are sections on balneology and physiotherapy by Dr. Matthew Ray, which should interest the uninitiated. The author displays considerable enthusiasm for short and ultra-short wave therapy, and the views expressed are well worthy of consideration by many to whom this method of treatment is new. The book closes with a useful chapter on the analgesic drugs, notably the modern unofficial preparations giving their composition and indications for their use. For purposes of reference, and as an aid in dealing with the everyday problems of practice, the book may be strongly recommended to general practitioner and specialist alike.

Squint Training. By M. A. PUGH, M.R.C.S., L.R.C.P. Pp. viii., 117. Illustrated. London: Oxford University Press. 1936. Price 7s. 6d.—The subject of orthoptic training for squint and errors of ocular muscle-balance has aroused an

increasing amount of interest in recent years, and a book describing modern methods of squint training was much needed. Dr. Pugh, medical officer in charge of the Orthoptic Department at Moorfields Hospital, has in this volume produced an excellent guide to the subject. The preface states that the book is intended to give only "a practical classification of cases, an accurate method of measuring the deformity, and the technique of treating a squint," and while it admirably achieves these objects, its value is greatly enhanced by additional chapters on the selection of cases for operation, post-operative results, and the results of various methods of treatment. A useful appendix contains illustrated descriptions of a number of modern training instruments. To all engaged in ophthalmic work, including especially members of the School Medical Service concerned with the question of treating squint, this book can be recommended as well worth studying.

A Manual of Practical Obstetrics. By O'DONEL BROWNE, M.B., B.Ch., F.R.C.P.I. Pp. vi., 363. Illustrated. Bristol: John Wright & Sons. 1936. Price 20s.—The Manual gives a short account of the methods used in practical obstetrics in Dublin. The scope of the matter is very full, even to a description of jejunostomy for hyperemesis, which is of very doubtful value. The Dublin method for the treatment of eclampsia is described in full, while Stroganoff's method is dismissed in a few lines. The whole book is of very doubtful value; it is too sketchy as a text-book, and not concise enough as a "cram" book, to be of use to students, but would be of value to general practitioners who employ the Dublin methods.

A Text-Book of Midwifery in the Tropics. Second Edition. By V. B. GREEN-ARMYTAGE, M.D., F.R.C.P., and P. C. DUTTA, M.B., F.R.C.S. Pp. xiv., 448. Illustrated. London: Butterworth & Co. (India), Ltd. 1936. Price 12s.—This text-book is written in the style of the popular "Synopsis" series, and is, in fact, a synopsis of midwifery rather than a text-book. The principles of the practice of obstetrics do not differ whatever the climate may be, and so the teaching we find is the orthodox, and applicable to any country. If used in conjunction with an ordinary text-book, it should be of great value to the student for examination purposes, and to the practitioner whether practising in the British Isles or the tropics.

Editorial Notes

The Royal Medical Benevolent Fund Centenary.

THE Council of this Fund is making a special appeal for new subscribers the main feature of the centenary. It points out that during the hundred years since the foundation the Fund has distributed nearly £400,000 to medical practitioners in difficulties due to sickness or infirmities, and to their widows and families left without provision. It is particularly desired to increase allowances to disabled practitioners to £52, and to their dependants to £36 per annum: and to create a special fund for the relief of very urgent and distressing cases.

The fact that at present allowances have necessarily to be substantially less than these very small sums speaks eloquently of the real need of the beneficiaries. But only those who have had personal experience of administration can fully appreciate how sad is the position of a professional man or his widow in such poverty that a grant so small as this means salvation from the workhouse—as too often it does.

The Fund is a charity: that is to say, it does not matter whether the beneficiary has in happier times been a subscriber or not. And it is a charity supported entirely, as is right, by contributions from the medical profession, every member of which should regard it as a duty, no less than a privilege, to subscribe regularly and generously. Subscriptions should be sent to the Treasurer, at 11 Chandos Street, London, W.1.

B.R.I. New Sisters' Hostel and Balconies.

THE following account is taken from the report which appeared at the time in the *Western Daily Press*.

"Tucker House," the new sisters' hostel at the Bristol Royal Infirmary, was officially opened on Friday, July 17th, by the Duchess of Beaufort.

The President (Lieut.-Colonel P. G. Robinson), introducing the Duchess, said that the committee had decided to call the new hostel "Tucker House," in recognition of a large legacy bequeathed to the institution by the late Mr. C. H. Tucker. The architect was Mr. H. Hill, the clerk of works, and the work was done by direct labour at a cost of £2,100. The building would accommodate twelve sisters.

Mr. Hill handed a key to the Duchess, who then unlocked the door and declared the hostel open.

After inspecting "Tucker House" the Duchess crossed over to the old block and declared open the new balconies which have been erected on the southern aspect of the wards. She was handed scissors and cut a ribbon across the staircase in declaring the balconies open. The President explained that Mr. Hill was also the architect of the balconies and that the work in this case was also done by direct labour at a cost of £3,250. The balconies provide accommodation for thirty-six to forty patients. A Garden Party and Nurses' Reunion were later held, although the rain interfered to some extent with the proceedings.

The old building of the Infirmary won a remarkable tribute from a Spanish visitor in 1935, who said she had visited hospitals and clinics all over the world and she had thought that any hospital building that

PLATE XVIII

NEW BALCONIES AT THE ROYAL INFIRMARY.
(View from the Garden.)

was 200 years old could only be pulled down. The modern adaptation of the Bristol Royal Infirmary had taught her a lesson she would never forget.

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Joseph Rogers Prize.

FOR the second time since its institution the Joseph Rogers Prize has been allotted to a Bristolian, and we congratulate Dr. Llewelyn Roberts, Assistant Medical Officer of Health, on his success. Ten years ago, when the first award was made, the successful essayist was H. J. McCurrich, M.S., F.R.C.S., who formerly lived in Clifton, was educated at Clifton College, and studied medicine for a time in Bristol University.

The prize is provided by a bequest of the late Dr. Joseph Rogers, a distinguished pioneer in public health work, who at his death in 1889 left a sum of £500 for the purpose of providing a prize every ten years "for such person who, in the opinion of the trustees, shall write the best or only good essay on the treatment of the sick poor, or the preservation of the health of the poor of this country, or on either of these subjects."

The trustees nominated by Joseph Rogers for the administration of this bequest were the Master of the Worshipful Society of Apothecaries and the President of the Royal College of Physicians. The prize has only been awarded once before, and amounts to between £200 and £300.

Dr. Joseph Rogers was brother of the late Professor Thorold Rogers, and uncle of Dr. Bertram Rogers, Consulting Physician to the Royal Hospital for Sick Women and Children in Bristol, and formerly Regional Medical Officer to the Ministry of Health.

Visit of Minister of Health to Bristol.

THE Minister of Health, Sir Kingsley Wood, P.C., M.P., visited Bristol on 16th September, 1936, spending two days in inspecting the various health services and housing conditions.

On his arrival, the Minister referred to the Portway Joint Clinic, where an arrangement has been made for a Health Visitor to carry out routine inspections at the schools in the area. He said that the scheme adopted at this Clinic was unique, and was being carefully studied at the Ministry. Such close co-operation between the Education and Health Committees in the interests of the children gave him great satisfaction.

The Minister visited Ham Green and Southmead Hospitals, and on the afternoon of 17th September he opened a new school and nursery centre at Ilminster Avenue. The Nursery Centre is administered on the lines of a nursery school, but is under the control of the public health authority in place of the Education Committee. It will form part of a training school for nursery nurses with its base at the Downend Babies' Home.

At the Preventive Medicine Department (Canynge Hall) the Minister commended the close relationship between the public analyst and the other sections in the interest of supervision of food supplies, a matter, as he said, of extreme importance to the vast numbers of people who live in this area.

In a speech at the Mansion House in the evening the Minister praised the health services of the city. He referred to the low infant mortality and maternal mortality rates, to the improved housing, and to the clinics and hospitals. He was satisfied that Bristol was maintaining a good standard of efficiency and progress in the discharge of its responsibilities. He

also paid a tribute to the work of the Corporation in slum clearance and rehousing: the establishment of a Community Centre at Knowle West housing estate won his particular admiration.

He expressed satisfaction at the improved health of the school children, who were healthier, taller and heavier than their predecessors. The Minister also spoke of the diseases that had disappeared, but whilst much had already been done, he reminded his audience of what remained to be done. He wished to stimulate action in regard to tuberculosis, cancer, respiratory and mental diseases.

Finally, he said that the health of our people at large is by no means satisfactory. To sum it up in a few short words, we must have a more and more positive policy in the matter of health services, aiming not merely at safeguards against disease, but at the active promotion of the health of the people.

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Extensions at Winford Orthopædic Hospital.

ON Saturday, 10th October, Lord Kennet (who, as Sir Hilton Young, was Minister of Health) opened two new Wards and an isolation block at Winford Orthopædic Hospital, which will increase the total beds by 40, making a total of 108. This extension has been, in part, financed by the shareholders of Bristol Housing Ltd., a company formed in 1909 for the purpose of developing a garden suburb at Shirehampton (Vol. LI., No. 194, page 279). This company had accumulated a reserve fund of £10,000. In 1934 it was decided to wind up the company: the shareholders' capital was returned, but as they had resolved

to make no profit out of the estate at Shirehampton the reserve fund was given to Winford Orthopædic Hospital to build new Wards. In addition to the new Wards the accommodation at the Nurses' Home has been increased. The total cost of the extensions is nearly £20,000.

Meetings of Societies

℞ GALENICALS ℞

GALENICALS had a successful summer term. Membership and interest continue to increase.

On May 7th Professor Lockhart's film on "Anatomical Movements in Living Acrobats" was exhibited.

On May 21st Professor Brocklehurst gave a very interesting lecture on "High Altitude Problems."

Excursions were made by members to the laboratories of Messrs. Glaxo Ltd., Greenford, where the synthesis of vitamins was found to be of particular interest, and to the works of Messrs. Boots Ltd., Nottingham.

The programme has now been completed for the forthcoming autumn term. All meetings will be held in the Physiology Lecture Theatre on Thursday nights at 8.15 p.m.

The first is on October 15th, when Mr. E. W. Hey Groves will speak on "Some Critical Moments in my Career."

The second is on November 5th, when Dr. Macdonald Critchley will speak on "Peter Kürten, the Düsseldorf Mass Murderer."

The third will be on November 26th, at which a debate: "That in the opinion of this house the existing system of

medical teaching needs immediate revision," will take place, in which both staff and students will be able to air their views.

The committee wishes to point out that duly-qualified medical practitioners and medical students may attend these meetings as guests, and Galenicals would welcome any members of the Bristol Medico-Chirurgical Society. Application should be made to the Secretary, Mr. L. Willoughby, 1B Elton Road, Tyndall's Park, Bristol 8, who will be pleased to send admission cards.

The committee would also like to point out that associate membership of Galenicals is open to all teachers in, and all qualified ex-*medical* students of, the Bristol Medical Faculty, at a subscription of 5s. for life, and it is hoped that in time many will join.

The Medical Library of the University of Bristol,

WITH WHICH IS INCORPORATED

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in June, 1936.

	October, 1936.
American Otological Society (1)	1 volume.
Professor R. J. Brocklehurst (2)	3 volumes.
Michell Clarke Fund (3)	23 volumes.
J. S. Cottrell & Co., Publishers (4)	1 volume.
Henry Phipps Institute (5)	1 volume.

Unbound periodicals have also been received from Professor E. W. Hey Groves, Professor C. Bruce Perry and Dr. J. Odery Symes.

THE ONE HUNDRED AND FIFTY-SIXTH LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures are attached have either been bought from the Library fund or received through the *Journal*.

Auld, A. G. .. .. *Asthma, Hay Fever, Migraine* 1936
Bailey, Hamilton .. *Emergency Surgery* .. .. 2nd Ed. 1936
Bailey and Love .. *Short Practice of Surgery* .. .. 3rd Ed. 1936
Balme, H. .. .. .. *The Relief of Pain* 1936
Beaumont, G. E. .. *Medicine* .. .. 2nd Ed. (3) 1935
Beaumont, G. E., and Dodds, E. C. *Recent Advances in Medicine* 8th Ed. (3) 1936
Black, G. V. .. .. *Operative Dentistry.* Vol. I–III 7th Ed. (3) 1936
Borradaile, L. A. .. *A Manual of Elementary Zoology* 8th Ed. 1935
Browne, O'Donel .. *Manual of Practical Obstetrics* 1936
Buchanan, A. M. .. *Manual of Anatomy* .. .. 5th Ed. (2) 1925
Cameron, A. T., and Gilmour, C. R. *The Biochemistry of Medicine* 2nd Ed. 1935
Chamberlain, E. N. .. *Symptoms and Signs in Clinical Medicine* .. 1936
Cheesman, J. E. .. *Baillière's Synthetic Anatomy* 1936
Cope, Z. .. .. .. *Early Diagnosis of the Acute Abdomen* 7th Ed. 1935
Cruikshank, J. Norman. *Bright's Disease* 1933
Dilling, W. J. .. .. *Bruce and Dilling's Materia Medica and Therapeutics* .. .. .. 14th Ed. (3) 1935
Dingwall, E. J. .. *The Girdle of Chastity* 1931
East and Bain .. .. *Recent Advances in Cardiology* 3rd Ed. (3) 1936
Ennis, Le R. M. .. *Dental Roentgenology* .. .. .. 2nd Ed. 1936
Evans, C. Lovatt .. *Recent Advances in Physiology* .. 5th Ed. 1936
Gabell, D. .. .. .. *Prosthetic Dentistry* .. .. .. 2nd Ed. (3) 1936
Greenwood, M. .. .. *The Medical Dictator* 1936
Hadfield, C. J. .. .. *Practical Anæsthetics* .. .. 2nd Ed. (3) 1931
Haggard, H. W., and Greenberg, L. A. *Diet and Physical Efficiency* .. 1935
Hale-White, W. .. *Great Doctors of the Nineteenth Century* .. 1935
Halliburton, W. O., Hewitt, J. A., and Robson, W. *Essentials of Chemical Physiology.* 2 Copies 12th Ed. (2) 1929
Halliburton, W. O., and Macdowall, R. J. S. *Handbook of Physiology* 34th Ed. 1935
Hammond, T. E. .. *Vitality and Energy in Relation to the Constitution* 1936
Handley, W. S. .. *The Prevention of Cancer* 1936
Harrington, F. T. .. *Treatment of Asthma* 1936
Hartley, P. H.-S., and Aldridge, H. R. *Johannes de Mirfeld: His Life and Works* 1936
Holzer, W., and Weissenberg, E. *Foundations of Short-wave Therapy* 1935
Illingworth, C. F. W., and Dick, B. M. *A Text-Book of Surgical Pathology* .. .. 2nd Ed. 1935

Joslin, E. P. .. .. *Treatment of Diabetes Mellitus* 5th Ed. (3) 1935
Kemble, J. .. .. *Hero Dust* 1936
King, E. S. J. .. .. *Localized Rarefying Conditions of Bone* (3) 1935
Lake, N. C. .. .. *The Foot* .. .. (3) 1935
Lewis, T. .. .. .. *Vascular Disorders of the Limbs* 1936
Martindale and Westcott. *The Extra Pharmacopœia.* Vol. II 20th Ed. 1935
May, C. H., and Worth, C. *A Manual of Diseases of the Eye* 7th Ed. (3) 1934
Meyer, W. .. .. *Normal Histology and Histogenesis* 1935
Mitchiner, P. H. .. *The Modern Treatment of Burns and Scalds* (3) 1935
Munch, J. C. .. .. *Bioassays* 1931
Pearson, W. J., and Wyllie, W. G. *Recent Advances in Diseases of Children* .. .. 3rd Ed. (3) 1935
Pugh, M. A. .. .. *Squint Training* 1936
Ray, M. B. .. .. *Hydrotherapy and Climatotherapy* .. .. (3) 1936
Roaf, H. E. .. .. *A Text-Book of Physiology* .. .. 2nd Ed. 1936
Rolleston, H. .. .. *The Endocrine Organs in Health and Disease* .. 1936
Samson, E. .. .. *Progressive Practice* .. .. (4) 1936
Schwartz, J. R. .. .. *Cavity Preparation and Abutment Construction* .. .. (3) 1936
Sheldon, J. H. .. .. *Hæmochromatosis* .. .. (3) 1935
Solis-Cohen, S., and Githens, T. S. *Pharmacotherapeutics* .. 1928
Starling, E. H. .. *Principles of Human Physiology* 7th Ed. (3) 1936
Stevenson, R. S. .. *Recent Advances in Laryngology* .. .. (3) 1933
Thomson-Walker, J. *Surgical Diseases and Injuries of the Genito-Urinary Organs* .. .. .. 2nd Ed. (3) 1936
Turner, A. L. .. .. *Diseases of the Nose, Throat and Ear* 4th Ed. 1936
Vaughan, J. M. .. *The Anæmias* .. .. 2nd Ed. 1936
Warwick and Tunstall. *First Aid* .. .. 15th Ed. 1936
Weiss, S., and others. *Diseases of the Liver* .. .. (3) 1935
Winton, T. R., and Bayliss, L. E. *Human Physiology* .. 2nd Ed. 1936
Woodwark, S. .. .. *Manual of Medicine* .. .. 4th Ed. (3) 1935
Yearsley, M. .. .. *Le Roy est mort!* 1935

TRANSACTIONS, REPORTS, JOURNALS, ETC.

Journal of Obstetrics and Gynaecology of the British Empire. Index to Vols. XXXI–XI 1936
Henry Phipps Institute, 26th Report .. .. (5) 1935
Surgical Clinics of North America, June, August, 1936 1936
Transactions of the American Otological Society. Vol. XXV (1) 1936
Transactions of the Medical Society, LIX 1936

Publications Received

From EDWARD ARNOLD & Co.:

Legal Problems in Medical Practice. By Dr. HARCOURT KITCHIN of Gray's Inn, Barrister-at-Law. Price 10s. 6d.

Manual of Pharmacology. By W. E. DIXON. Price 18s.

From BAILLIÈRE, TINDALL AND COX:

British Masters of Medicine. Edited by Sir D'ARCY POWER, K.B.E., F.R.C.S., F.S.A. Price 7s. 6d.

CASSELL & Co. LTD.:

The Doctor. By MARY ROBERTS RINEHART. Price 7s. 6d.

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Favourite Prescriptions. Ed. ROLLESTON and MONCRIEFF. Price 10s. 6d.

From WILLIAM HEINEMANN LTD.:

Research on the Low Potencies of Homœopathy . . . . By W. E. BOYD, M.A., M.D. Price 2s. 6d.

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HUTCHINSON'S SCIENTIFIC AND TECHNICAL PUBLICATIONS:

Essentials of Modern Medical Treatment. By VINCENT NORMAN. Price 10s. 6d.

From H. K. LEWIS & Co. LTD.:

Reports on Chronic Rheumatic Diseases . . . . Edited by C. W. BUCKLEY, M.D., F.R.C.P. No. 2. Price 10s. 6d.

Diseases of the Testicle. By HAMILTON BAILEY, F.R.C.S. Price 12s. 6d.

From OXFORD UNIVERSITY PRESS:

An Introduction to Psychological Medicine. By R. G. GORDON, M.D., D.Sc., F.R.C.P. (Ed.), N. G. HARRIS, M.D., B.S., D.P.M., and J. R. REES, M.A., M.D., D.P.H. Price 10s. 6d.

The Human Foot: Its Evolution, Physiology and Functional Disorders. By DUDLEY J. MORTON (Associate Professor of Anatomy, Columbia University). Price 15s.

Home Care of the Mental Patient. By Dr. ARIE QUERIDO. Price 2s. 6d.

Health, Sickness and Psychology. By Rev. R. W. WILDE. Price 3s. 6d.

Paget's Disease of the Nipple. By KEITH INGLIS. Price 36s.

From WILLIAMS & NORGATE LTD.:

The Medical Dictator . . . By Major GREENWOOD, F.R.S., D.Sc., F.R.C.P. Price 7s. 6d.

From JOHN WRIGHT & SONS:

The British Journal of Surgery, XXIV. No. 93. July, 1936. Price 12s. 6d.

Local Medical Notes

APPOINTMENTS.

University of Bristol.—R. T. Cooke, M.D., Assistant Clinical Pathologist, Department of Preventive Medicine; C. A. H. Gee, M.B., Ch.B., Clinical Lecturer in Diseases of Children; L. C. Oliver, F.R.C.S., Recognized Teacher in Surgery; P. Phillips, M.D., Recognized Teacher in Obstetrics; C. A. Ashford, M.A., Ph.D., Lecturer in Physiology; Miss J. Wiseman, B.Sc., Assistant Bacteriologist, Department of Preventive Medicine; H. Tout, M.A., Colston Research Fellow in Social Survey.

Bristol Royal Infirmary.—W. Melville Capper, M.R.C.S., L.R.C.P., M.B., B.S., F.R.C.S., Senior Resident Medical Officer.

Bristol General Hospital.—L. C. Oliver, F.R.C.S., Resident Surgical Officer and Registrar.

EXAMINATION RESULTS.

University of Bristol.—Students of the University have recently passed the following examinations:—

M.B., Ch.B.—*First Examination. Pass:* J. T. N. Cole, D. S. Maunsell, Phyllis D. Moses.

B.D.S.—*First Examination. Pass:* F. C. Baker, K. L. Brown.

L.D.S.—*Preliminary Science Examination. Pass:* H. C. Davey, L. Murray, J. R. Herbert.

University of Cambridge.—M.B., B.S. (*Part I.*). *Pass:* C. J. F. Coombs.

Conjoint Board.—L.R.C.P., M.R.C.S. *Pass: In Anatomy and Physiology:* Mary R. More, E. W. J. Townsend. *In Anatomy:* C. J. R. Jacob, Joyce S. Miller, J. H. G. Morris. *In Physiology:* J. I. Williams. *In Pathology and Medicine:* J. A. Cochrane.* *In Medicine:* W. H. Hayes.* *In Midwifery:*

* Qualified.

Margaret A. W. Hawkes, F. D. Mowat. *In Pathology :* J. H. Bulleid, E. J. Lace, Mabel W. N. Tribe.

L.D.S., R.C.S.—*Final Examination.* (*Part II.*) *Pass :* A. N. Brimelow,* J. T. S. Hutchins,* C. C. B. Plumley,* W. White.*

* Qualified.

The Long Fox Memorial Lecture.—The twenty-fifth Long Fox Memorial Lecture was delivered at 8.30 p.m. on Tuesday, 20th October, in the University, by Dr. A. Bulleid, F.S.A. Subject : "Somerset Lake Villages."